

PRINCE OF SONGKLA UNIVERSITY

THE FACULTY OF ENGINEERING

Midterm Examination Semester II

Academic Year 2006

Date: December 20,2005

Time: 09:00-12:00

Subject: 225-465 Value Engineering and Cost Analysis **Room:** R300

ทฤษฎีในการสอบ โทษขั้นต่ำคือ ปรับตกในรายวิชาที่ทฤษฎี และพักรเรียน 1 ภาคการศึกษา

Instructions :

- 1) Answer all questions.
- 2) All books and materials are allowed.

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1. What is the major benefit of *Value Engineering* over *Industrial Engineering* and *Quality Control*?. Explain the benefit of VE in product design. (20 points)
 2. Analyse and list the basic functions of the items as the following:
 - 2.1 preserved egg
 - 2.2 compass
 - 2.3 name card
 - 2.4 glutinous rice roasted in bamboo joint
 - 2.5 ball-point pen (20 points)
 3. From the basic functions in 2.5, draw a sketch design of innovation for a ball-point pen and determine costs of functions. (20 points)
 4. Draw a sketch designed for an ideal product using creative thinking principle. (20 points)
 5. What is the mental block if the package of “Coke” has been changed from can to paper? (20 points)

Prepared by

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